

**MODULE IV**  
**STORAGE AND TREATMENT IN TANKS**



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**(All Attachments Referenced in Module IV of the Permit are located in Volume-2)**

**Attachment IV-1.....Tank System Designs, Assessments, Drawings and Specifications**  
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## MODULE IV - STORAGE AND TREATMENT IN TANKS

### IV.A. APPLICABILITY

The requirements of this module pertain to the storage and treatment of hazardous waste in the tank systems identified in Condition IV.B. The Permittee shall comply with Utah Admin. Code R315-8-10 (40 CFR §264.190 - §264.200 by reference) and the conditions of this permit for all tank systems. Management of PCB in tanks shall be accordance with Module X of this permit.

### IV.B. WASTE IDENTIFICATION AND TANK USAGE

- IV.B.1. CERCLA Hazardous Wastes. The Permittee may receive wastes that arrive without E.P.A. waste code numbers, provided that these wastes are from remediation sites regulated under CERCLA and they comply with all CERCLA off-site management policies. These wastes shall be managed as hazardous wastes and are subject to the terms of this permit.
- IV.B.2. RCRA/TSCA Wastes. The Permittee may receive wastes that arrive with EPA waste codes and are also regulated by TSCA. These wastes are subject to the terms of this permit.
- IV.B.3. The Permittee shall only treat or store hazardous wastes or RCRA/TSCA wastes in the tanks specified in Conditions IV.B.7. and IV.B.8., subject to the terms of this permit and the Land Disposal Restriction (LDR) treatment standards specified in Utah Admin. Code R315-13-1 (40 CFR §268 by reference).
- IV.B.4. Tanks marked as “INACTIVE” in Condition IV.B.6, below, are not currently in use and may not be placed into service until certified as suitable for its intended use as required by Condition IV.C.11 and approved by the Director. All inactive tanks and tank systems shall be clearly and durably marked or labeled as “**OUT OF SERVICE**” at all times. Inactive tanks and ancillary equipment shall not contain free liquids.
- IV.B.5. Waste that has an average volatile organic compound concentration of greater than or equal to 500 ppmw shall not be treated or stored in tanks.
- IV.B.6. Waste shall not be stored in a tank unless the material of construction of the tank is compatible with the waste.
- IV.B.7. Waste Stabilization Tanks 122-TN-001, -002 and -003
- IV.B.7.a. Each tank is twenty feet long by twenty feet wide by eight feet high (23,936 gallons capacity) and is constructed of carbon steel.

- IV.B.7.b. The Permittee shall only treat the hazardous wastes listed in Attachment II-WAP Appendix 3 in the waste stabilization tanks 122-TN-001, 122-TN-002 and 122-TN-003.
- IV.B.7.c. All waste shall be removed from the stabilization tanks following the treatment process, utilizing the normal method of waste removal. Treatment of hazardous waste shall commence before the end of the shift during which the waste is placed in a tank. The treatment process shall not exceed 72 hours. If there is waste remaining in the tank that cannot be removed by the normal method of waste removal, the Permittee shall apply the EPA waste codes of the batch of waste not entirely removed, to the subsequent load(s) processed in the tank.
- If there is RCRA/TSCA waste remaining in the tank that cannot be removed by the normal method of waste removal, then the Permittee shall consider all subsequent load(s) processed in the tank as PCB.
- IV.B.7.d. The waste management practices specified in the Special Waste Management Plan in Attachment II-8 shall apply to wastes F020, F021, F022, F023, F026, F027 and F028.
- IV.B.7.e. The maximum level of reagent and waste to be treated in the stabilization tanks shall be no more than five feet or 15,000 gallons. The five-foot level shall be marked on the inside of each stabilization tank. No waste shall splash over the sides of the tank.
- IV.B.7.f. For restabilization, an increased volume of waste and reagent may be placed into a tank as long as 4,150 gallons of freeboard (one foot five inches) is maintained (19,797 gallons of waste/reagent). This will accommodate the precipitation from a 25-year, 24-hour storm event and leave enough space to prevent the waste from splashing over the sides of the tanks.
- IV.B.8. Leachate Storage Tanks 119-TN-001 (INACTIVE), -002, -003 (INACTIVE) and -004 (INACTIVE)
- IV.B.8.a. Design – Tanks 119-TN-001, -002 and -003 are each twelve feet in diameter and twenty feet high (maximum allowable capacity 17,000 gallons per tank). Tank 119-TN-004 is twelve feet in diameter and twenty-eight feet and eleven inches high (maximum allowable capacity of 19,600 gallons). All tanks are constructed of carbon steel.
- IV.B.8.b. The Permittee shall only store run-off containment waters from secondary containment, non-hazardous wastewaters, multi-source leachate (F039), and TSCA\RCRA leachate (combination multi-source leachate from Cell B/6) in Storage Tanks 119-TN-001, 119-TN-002, 119-TN-003 and 119-TN-004. Treatment is not allowed in these tanks.

IV.B.8.c. The Permittee shall presume the contents of any individual leachate storage tank to be untreated leachate unless the tank is specifically and clearly marked as containing treated leachate.

#### **IV.C. GENERAL OPERATING REQUIREMENTS**

IV.C.1. The Permittee shall place waste in the Stabilization Tanks for the purpose of treatment or storage as specified in the conditions of Section IV.B. of this module.

IV.C.2. The treatment of hazardous wastes in the tanks identified in the conditions of Section IV.B. of this module, shall meet all treatment standards specified in Utah Admin. Code R315-13-1 (40 CFR §268 by reference).

IV.C.3. The Permittee shall use the controls and good practices to prevent spills and overflows from each tank system, as specified in Attachment II-5, "Preparedness and Prevention."

IV.C.4. In the event of an equipment or power failure, the Permittee shall stop adding waste to the affected tank system.

IV.C.5. The Permittee shall comply with the requirements specified in Utah Admin. Code R315-8-10 (40 CFR §264.193 incorporated by reference) when there has been a leak or spill from a tank or tank system that is unfit for use.

IV.C.6. The Permittee shall comply with the requirements specified in the facility Contingency Plan, Attachment II-6, when there has been a release from a tank system that threatens human health or the environment.

IV.C.7. The Permittee shall notify the Director as soon as possible, but no later than 24 hours after detection of a release of a reportable quantity, as defined in Utah Admin. Code R315-9, from a tank system to the environment.

IV.C.8. The Permittee shall submit a report identifying details of the release, to the Director within 15 days of detection of a release to the environment.

IV.C.9. The Permittee shall repair a tank system from which there has been a leak or spill or close the tank, if it is unfit for use, as specified in Utah Admin. Code R315-8-10 (40 CFR §264.196 by reference).

IV.C.10. Before a repaired tank or ancillary piping system is returned to service, it shall be certified by a qualified, independent Utah registered professional engineer, that the repaired equipment is capable of safely managing hazardous waste without release. In accordance with Utah Admin. Code R315-8-10, the Permittee shall submit the tank certification report to the Director within seven days of returning the repaired system to service.

IV.C.11. A qualified, independent Utah registered professional engineer shall certify any tank that has been out of service for 360 days. The certification shall state the tank system is capable of safely managing hazardous waste without release. The Permittee shall have this certification performed before the tank is put back into service. In accordance with Utah Admin. Code R315-8-10, the Permittee shall submit the certification report to the Director within seven days of returning the tank system to service.

#### **IV.D. SPECIFIC OPERATING REQUIREMENTS**

IV.D.1. All F039 leachate shall meet the LDR treatment standards specified in Utah Admin. Code R315-13-1 before final disposal at the facility.

IV.D.2. RCRA/TSCA waste that has PCB as an Underlying Hazardous Constituent (UHC) shall meet the LDR treatment standards specified in Utah Admin. Code R315-13-1 before final disposal at the facility. In the event the PCB concentration does not meet the LDR treatment standard (when present as an UHC) the Grassy Mountain Facility will follow the site-specific treatment variance procedures in Utah Admin. Code R315-13-1 (40CFR268.44 by reference).

IV.D.3. All hazardous waste residues from incineration and thermal treatment that are stored or treated in the tank system identified in Condition IV.B. shall meet land disposal restrictions prior to final disposal at the facility.

IV.D.4. Waste code tracking in the stabilization tanks and tank decontamination of the tanks following the treatment of RCRA or RCRA/TSCA waste streams shall be done in accordance with Section 7 of the Waste Analysis Plan.

#### **IV.E. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTES**

IV.E.1. Ignitable or reactive waste shall not be placed in a tank system unless the provisions of Utah Admin. Code R315-8-2.8 (40 CFR §264.17) and Utah Admin. Code R315-8-10 (40 CFR §264.198 by reference) are met.

IV.E.2. The Permittee shall record compliance with Condition IV.E.1., as required by Utah Admin. Code R315-8-2.8 and place this documentation in the facility Operating Record.

IV.E.3. The Permittee shall maintain the safety separation distance around tank systems as specified in the most recent version of the Uniform Building Code.

IV.E.4. The Permittee shall ground all rail cars (applicable to rail unloading areas) and truck tankers during the unloading of ignitable waste, to an effective and secure earth ground by means of a heavy clamp and cable prior to and during unloading.

#### **IV.F. SPECIAL REQUIREMENTS FOR INCOMPATIBLE WASTES**

- IV.F.1. Incompatible waste shall not be placed in a tank system unless the provisions of Utah Admin. Code R315-8-2.8 (40 CFR §264.17) and Utah Admin. Code R315-8-10 (40 CFR §264.199 by reference) are met.
- IV.F.2. Wastes or other material may be stored in a tank or tank system only if it is compatible with the wastes already stored or placed in the tank, and compatible with the tank or tank system construction material.
- IV.F.2.a. The Permittee shall not store acids or oxidizing halides in any carbon steel tank systems.
- IV.F.3. The Permittee shall not store hazardous wastes, treatment reagents, or other materials in any of the tank systems if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail. The Permittee shall not place hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible material. Decontamination solutions generated from cleaning tank systems shall be considered a hazardous waste and shall be managed appropriately. The requirements for incompatible wastes identified in Utah Admin. Code R315-8-2.8 (40CFR §264.17) shall apply.
- IV.F.5. The Permittee shall record compliance with Condition IV.F.4. as required by Utah Admin. Code R315-8-2.8 and place this documentation in the facility Operating Record.

#### **IV.G. INSPECTION REQUIREMENTS**

- IV.G.1. The Permittee shall comply with the inspection requirements specified in Utah Admin. Code R315-8-10 (40 CFR §264.195 by reference), Condition II.G. and the Tank Inspection Schedules as shown in Attachment II-3; except that only active tanks need to be inspected and the tank heating coils need only be inspected on an annual basis.
- IV.G.2. The Waste Stabilization Tank Systems, Tanks 122-TN-001, 122-TN-002 and 122-TN-003, shall be inspected for leaks at least once during each operating day. Any liquids accumulated in the annulus between the inner and outer shells shall be removed, analyzed, and managed in accordance with this permit.
- IV.G.3. All active tank systems identified in Condition IV.B., shall be certified by a qualified, independent Utah registered, professional engineer, at least once every September. The certification shall state the tank system is capable of handling hazardous waste without release and can safely manage hazardous waste. The Permittee shall have this annual certification performed within 12 months of the

last inspection. The certification report shall be incorporated into the Operating Record and submitted to the Director within 60 days of the inspection.

IV.G.4. For each tank system found unfit for use as a result of the inspections, required in Condition IV.G.3, the Permittee shall comply with the repair and notification requirements specified in Conditions IV.C.9, IV.C.10 and IV.C.11.

IV.G.5. All tank inspection logs and certification reports shall be made part of the Operating Record and shall be maintained at the facility until closure of the facility.

#### **IV.H. NEW AND MODIFIED TANK SYSTEMS**

The Permittee shall comply with Conditions I.P., covering planned changes, and I.R., certification of new construction and modifications. All new tanks systems and modification to existing systems shall also meet secondary containment and leak detection requirements specified in Utah Admin. Code R315-8-10.

#### **IV.I. RESPONSE TO LEAKS OR SPILLS**

IV.I.1. In the event of a leak or a spill from a tank system or if the tank system becomes unfit for continued use, the Permittee shall remove the system from service immediately and complete the following actions:

- a. Stop the flow of hazardous waste into the tank system and inspect the system to determine the cause of the release.
- b. Remove waste and accumulated precipitation from the tank system and containment system within 24 hours of detection of the leak or spill to prevent further release and allow inspection and repair of the system. If the Permittee finds that it will be impossible to meet this time period, the Permittee shall orally notify the Director and demonstrate that a longer time period is required.
- c. Manage the collected material as a hazardous waste in accordance with all applicable requirements of Utah Admin. Code R315-5.
- d. The Permittee shall make any necessary repairs to fully restore the integrity of the tank system before returning the system to service.
- e. For all major repairs to eliminate leaks or restore the integrity of the tank system, the Permittee shall obtain a certification by an independent, qualified Utah registered professional engineer that the repaired system is capable of handling hazardous wastes without release for the intended life of the system before returning the system to service. Examples of major repairs are:

installation of an internal liner, repair of a ruptured tank, or repair or replacement of a secondary containment vault.

IV.I.2. In the event that a leak or spill from a tank system escapes the secondary containment system, the Permittee shall complete the following actions in addition to those specified in Condition IV.I.1.:

The Permittee shall immediately conduct a visual inspection of all releases to the environment and based on that inspection shall (1) prevent further migration of the leak or spill to soils or the surface water and (2) remove and properly dispose of all contamination of the soil or surface water.

IV.I.3. If the Permittee replaces a component of a tank system to eliminate a leak, that component must satisfy the requirements for new tank systems or components in Utah Admin. Code R315-8-10. (40 CFR §264.192 and §264.193 incorporated by reference).

IV.I.4. If a tank system cannot be repaired or is otherwise unfit for continued use, the Permittee shall close that tank system in accordance with the Closure Plan in Attachment 7.

IV.I.5. Records of releases from a tank system that are contained within a secondary containment system shall be maintained in the operating record. These records shall include information on the cause of the release, the volume and type of material released, any injuries or damage caused by the release, and corrective measures taken.

#### **IV.J. CLOSURE AND POST-CLOSURE CARE**

IV.J.1. To close a tank system, the Permittee shall remove all waste residues and decontaminate the system as specified in Utah Admin. Code R315-8-7 and Utah Admin. Code R315-8-10, and Condition II.N.

IV.J.2. If a current cost estimate to close a tank system and provide post closure care is greater than the cost estimates specified in Attachment II-7, the Permittee shall notify the Director as specified in Utah Admin. Code R315-7-14 and provide updated documentation for financial assurance based on the revised closure plan and post closure care within 90 days of the initiation of closure.

IV.J.3. The Permittee shall maintain funding to close all tanks and tank systems, including those designated as “inactive.”

IV.J.4. Post-closure care of all tank systems shall meet the requirements of Utah Admin. Code, R315-8-14.5 and Condition II.O of the Permit.